NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE

Certificate No. TA20313M

This is to certify that the undernoted product(s) has/have been approved in accordance with the relevant requirements of 12.3.3, Part D of the "Rules for the Survey and Construction of Steel Ships" and Chapter 9, Part 6 of the "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use".

This certificate is issued to

Manufacturer:	**Viega Technology GmbH & Co. KG, Germany**
Product description:	**Compression couplings (Press type)**
Type designation(s):	**Seapress, SeapressXL,**
	Profipress
	Sanpress Inox
Approval No.:	**05FV101B**
Valid until:	**16 June 2025**

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 17 June 2020

T. Shimada
General Manager
Machinery Department

1. Particulars and conditions

1.1 Seapress, Seapress XL

Material

    Body   : CuNiFe

Pipe sizes (mm)

    Seapress   : 15x1.0; 22x1.0; 28x1.5; 35x1.5; 42x1.5; 54x1.5

    SeapresXL   : 76.1x2; 88.9x2; 108x2.5

MAWP

    1.6 MPa   : 15 mm to 42 mm and 76.1 mm to 108 mm

    1.5 MPa   : 54 mm

Design temperature and O-ring* : see Table 1

1.2 Profipress

Material

    Body   : Copper, Gun metal or Silicon bronze

Pipe sizes (mm)

    12x1.0; 15x1.0, 18x1.0, 22x1.0; 28x1.5; 35x1.5; 42x1.5;
    54x2.0; 64.0x2.0; 76.1x2.0; 88,9x2.0; 108x2.5

MAWP

    1.6 MPa   : 12 mm to 108 mm

Design temperature and O-ring* : see Table 1

1.3 Sanpress Inox

Material

    Body   : Stainless steel

Pipe sizes (mm)

    12x1.0; 15x1.0, 18x1.0, 22x1.2; 28x1.5; 35x1.5; 42x1.5;
    54x1.5; 64.0x2.0; 76.1x2.0; 88.9x2.0; 108x2.0

MAWP

    1.6 MPa   : 12 mm to 108 mm

Design temperature and O-ring* : see Table 1

Table 1   Design Temperature and Sealing Materials

Sealing Materials	EPDM	FKM	HNBR
Temperature Rrange	-10 °C / +110 °C	-5°C / +140 °C	-40 °C / +82 °C
Type Designation	Seapress, SeapressXL Profipress Sanpress Inox	Profipress Sanpress Inox	Seapress, SeapressXL Profipress Sanpress Inox

*It to be noted that the selection of the materials considers the intended service condition and installation area of the piping system. In particular, the resistance to corrosion, erosion, oxidation and other deterioration during intended service life.

2. Application

2.1 Seapress and SeapressXL

The joints can be used the following piping lines:

1. cargo oil lines and crude oil washing lines
2. inert gas: water seal effluent lines, scrubber effluent lines, main lines, and distributions lines
3. fuel oil lines, lubricating oil lines, hydraulic oil lines, and thermal oil lines
4. bilge lines, fire main and water spray, foam system, sprinkler system, ballast system, cooling sea water system, tank cleaning services, and non-essential sea water systems
5. cooling fresh water systems, condensate return, and non-essential fresh water systems
6. deck drains (internal), sanitary drains, scuppers and discharge line
7. sounding and vent lines
8. starting/control air, service air (non-essential), brine, CO_2 system, and steam lines

The joints are not to be used for:

1. piping belonging Group I and II specified in the requirements of 12.1.3, Part D of the Rules, and
2. the systems where pressure pulsation other than water hammer is expected.

2.2 Profipress and Sanpress Inox

The joints can be used the following piping lines:

Domestic warm & cold water (potable water), Cooling fresh water systems,
Condensate return, Domestic warm water heating, Service air,
Wet sprinkler, Non-essential fresh water systems, Deck drains (internal),
Sanitary drains, Scuppers and Discharge line

The joints are not to be used for:

1. piping belonging Group I and II specified in the requirements of 12.1.3, Part D of the Rules, and
2. the systems where pressure pulsation other than water hammer is expected.

3. Type approval tests carried out

Tightness test, Vibration test, Burst pressure test, Pull-out test, Fire endurance test, Vacuum test

4. Documents

Take off dimension / Installation systems

5. Production test

Hydraulic test for the pipe joints to be carried out.

Notice

Any significant changes in design or construction of the above items may render this certificate invalid.

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